

Claims

1. Method for processing of drilling fluid from a
drilling hole (10) in an underwater well to a treatment
plant, or a storage installation, arranged on a floating
drilling rig or drilling vessel, for treatment or storage
of cuttings, where the drilling fluid, before a riser is
connected between the drilling hole and the floating
drilling rig or drilling vessel, is being transported from
the drilling hole (10) on the ocean bed by a submerged pump
module (14) connected to a sealing device (12), via a
return line (16), to the treatment plant or storage
installation on the floating drilling rig or drilling
vessel, characterised in that before a blow-out valve is
connected to the well head, the submerged pump module (14)
and the sealing device (12) provides an outlet pressure,
dependent on the specific weight of the mud and the ocean
depth, which is high enough for transportation of the
drilling fluid from the drilling hole (10), through the
return line (16) and up to the floating drilling rig or
drilling vessel.

2. Method in accordance with claim 1, characterised in
that drilling fluid is being transported through the return
line (16) to an existing line, such as a flow line, on the
floating drilling rig or drilling vessel for further
transportation to the treatment plant or storage
installation.

3. Method in accordance with claim 2, characterised in
that, after the cuttings has been treated, using a method
which per se is known, on the floating drilling rig or
drilling vessel, the treated cuttings is being injected in
a second drilling hole (18) provided on the ocean bed, or
in a suitable annular space in the first drilling hole
(10).

4. System for processing of drilling fluid from a drilling hole (10) in an underwater well to a floating drilling rig or drilling vessel, particularly before a riser is connected between the drilling hole and the floating drilling rig or drilling vessel, a submerged pump module (14), connected to a sealing device (12), is arranged for transportation of drilling fluid from the drilling hole (10) on the ocean bed, via a return line (16), to a treatment plant or a storage installation on the floating drilling rig or drilling vessel, characterised in that the submerged pump module (14) and the sealing device (12), before a blow-out valve is connected to the well head, are adapted to provide an outlet pressure which is high enough for transportation of the drilling fluid from the drilling hole (10), through the return line (16) and up to the floating drilling rig or drilling vessel.

5. System in accordance with claim 4, characterised in that the submerged pump module (14) and the sealing device (12) together form a suction and centralisation module, arranged at the wellhead.

6. System in accordance with claim 5, characterised in that the pump module's (14) speed/output is adjustable in relation to the return flow from the well, wherein the requested differential pressure is maintained at the sealing device (12).

7. System in accordance with claim 5, characterised in that the submerged pump module (14) arranged on the ocean bed comprises a number of pumps to provide necessary pressure, such as a centrifugal and/or a friction pump connected in series, in which the pump, or pumps, are driven by a submerged electric motor which is connected to the pump, or pumps.